

REMARKS

Entry of this Amendment and reconsideration and allowance of this application, as amended, are respectfully requested.

Claim 1 has been amended to include the limitations of claim 2 (cancelled).

Claim 3 has been amended to include the limitations of claim 4 (cancelled) and to correct the 35 USC 112 problem.

Claims 1-4 stand rejected under 35 USC 102(b) as being anticipated by Grasselli et al. (US Patent 5,374,410). This ground of rejection is respectfully traversed. At column 4, lines 45-65 of Grasselli et al., there is included the statement that zeolite beta has a constraint index in the range of approximately 0.6-2.0. However, there is no teaching in the reference regarding SiO₂/Al₂O₃ ratio of zeolite beta.

The Examiner is respectfully referred to Grasselli et al. column 4, lines 68-68 which has no teaching with respect to a SiO₂/Al₂O₃ ratio.

Grasselli et al. Example 20 (column 11, lines 35-50) is an example using ZSM-5 (reducing agent: NH₃), but there is no suggestion that zeolite beta has excellent denitration performance vis-a-vis other substances.

Our inventors have already obtained a result that the denitration performance of ZSM-5 is worse than that of β zeolite, as shown in Table 2 in our specification.

At column 6, lines 35-40 of Grasselli et al., it is stated only that zeolite can include various cations in its structure, and therein it is not stated that those zeolites have excellent denitration performance.

In Example 20 (column 11, lines 35-50 of Grasselli et al.), it is not stated at all what cation form of catalyst is used.

As described above, Grasselli et al. does not teach any information suggesting our claimed inventions. It is not easy to determine a combination of methanol/dimethyl ether as reducing agent, β zeolite as zeolite and proton type (hydrogen form) as cation form, from among the various possible elements. This is implied by the many examples of reducing agents, various kinds of zeolite and many existing cation forms taught by Grasselli et al.

Claim 1 has been amended to include the limitations previously found in claim 2 and now expresses a combination not taught by the Grasselli et al. reference.

Claims 1 and 2 stand rejected under 35 USC 102(b) as being anticipated by JP 2000-308831. This ground of rejection is respectfully traversed.

In JP 2000-308831, BEA (= β zeolite) of H-type (= proton type) is used as a carrier on which a noble metal as Pt, Pd or the like being active in denitration reaction and using

methane as a reducing agent is deposited by the impregnation method, ion-exchange method or the like. Therefore, the claimed catalyst, that is β zeolite of H-type (= proton type) not including metal component is different from that disclosed in JP 2000-308831 in the cation form.

Claims 1-2 stand rejected under 35 USC 102(b) as being anticipated by Feeley et al. This ground of rejection is respectfully traversed. In the catalyst of Feeley et al., the zeolite is used as a carrier on which Cu, Co and Fe are placed as metal components. Therefore, the catalyst of Feeley et al. is different from the claimed catalyst in the catalyst composition.

Claims 3-4 stand rejected under 35 USC 103(a) as being unpatentable over JP 2000-308831 in view of Grasselli et al. This ground of rejection is respectfully traversed.

JP 2000-308831 does not disclose a hydrogen form β zeolite. Rather, it discloses a β zeolite available as a catalyst on which a noble metal as Pt, Pd or the like is placed as an indispensable component. That is, the catalyst of JP 2000-308831 is different from that claimed in the present application in the catalyst composition.

The Examiner states that methanol and methane are functionally equivalent in the reduction of nitrogen oxides using a reducing agent. However, it is well known fact for those skilled in the art that the reducing agents different from each other show the denitration performance different from each other. Therefore, those skilled in the art would not think that methanol which is a compound including oxygen is substantially the same as methane which is very stable hydrocarbon.

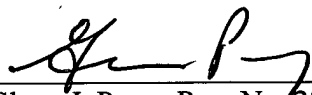
For the above mentioned reasons, it is believed that the amended claims should be allowed and such notice is solicited.

If any additional fees are due in connection with the filing of this response, please charge the fees to Deposit Account No. 02-4300 under our charge order 034145.002. Any overpayment can be credited to Deposit Account No. 02-4300.

Respectfully submitted,

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